

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-12 (canceled).

Claim 13 (new): A boundary acoustic wave device comprising:

a first medium layer and a second medium layer arranged such that a boundary acoustic wave propagates along a boundary between the first medium layer and the second medium layer; wherein

a sound velocity of the second medium layer is lower than a sound velocity of the first medium layer, and a thickness of the second medium layer is at least about 7λ , where the wavelength of the boundary acoustic wave is represented by λ .

Claim 14 (new): The boundary acoustic wave device according to Claim 13, wherein an electroacoustic transducer is arranged to generate the boundary acoustic wave and disposed between the first medium layer and the second medium layer.

Claim 15 (new): The boundary acoustic wave device according to Claim 14, wherein a reflector is provided at the boundary between the first medium layer and the second medium layer.

Claim 16 (new): The boundary acoustic wave device according to Claim 13, wherein a third medium layer having a sound velocity less than the sound velocity of the first medium layer and the second medium layer is provided between the first medium layer and the second medium layer and defines a boundary layer along which the boundary acoustic wave propagates.

Claim 17 (new): A boundary acoustic wave device comprising:

a first medium layer and a second medium layer arranged such that a boundary acoustic wave propagates along a boundary between the first medium layer and the second medium layer; wherein

a wave scattering structure is arranged to scatter an acoustic wave and disposed on at least one surface of the first and second medium layers at a side opposite to a boundary surface therebetween.

Claim 18 (new): The boundary acoustic wave device according to Claim 17, wherein a sound velocity of the second medium layer is less than a sound velocity of the first medium layer, and the wave scattering structure is provided on the second medium layer.

Claim 19 (new): The boundary acoustic wave device according to Claim 17, wherein the wave scattering structure includes at least one recess portion provided on the at least one surface of the first and second medium layers at the side opposite to the boundary surface.

Claim 20 (new): The boundary acoustic wave device according to Claim 19, wherein a depth of the at least one recess portion is at least about 0.05λ , wherein the wavelength of the boundary acoustic wave is represented by λ .

Claim 21 (new): The boundary acoustic wave device according to Claim 19, wherein the at least one recess portion includes a plurality of recess portions, and a pitch between each of the plurality of recess portions is at least about 1λ , where the wavelength of the boundary acoustic wave is represented by λ .

Claim 22 (new): The boundary acoustic wave device according to Claim 17, wherein the wave scattering structure includes at least one protrusion portion provided on the at least one surface of the first and second medium layers at the side opposite to the boundary surface.

Claim 23 (new): The boundary acoustic wave device according to Claim 22, wherein a height of the at least one protrusion portion is at least about 0.05λ , where the wavelength of the boundary acoustic wave is represented by λ .

Claim 24 (new): The boundary acoustic wave device according to Claim 22, wherein the at least one protrusion portion includes a plurality of protrusion portions, and a pitch between each of the plurality of protrusion portions is at least about 1λ , where the wavelength of the boundary acoustic wave is represented by λ .

Claim 25 (new): The boundary acoustic wave device according to Claim 14, wherein a thickness of the medium layer on which the wave scattering structure an acoustic wave is provided is about 7λ or less, where the wavelength of the boundary acoustic wave is represented by λ , and the thickness of the medium layer is the distance between the boundary surface and the surface opposite thereto.

Claim 26 (new): The boundary acoustic wave device according to Claim 17, wherein the first medium layer is made of a piezoelectric substrate including Li, the second medium layer is made of SiO_2 , and at least one recess portion is provided on a surface of the second medium layer made of SiO_2 .

Claim 27 (new): The boundary acoustic wave device according to Claim 17, wherein the first medium layer is made of a piezoelectric substrate including Li, the second medium layer is made of SiO_2 , and at least one protrusion portion is provided on a surface of the second medium layer made of SiO_2 .

Claim 28 (new): The boundary acoustic wave device according to Claim 17, wherein an electroacoustic transducer is arranged to generate boundary acoustic wave and is disposed between the first medium layer and the second medium layer.

Claim 29 (new): The boundary acoustic wave device according to Claim 28, wherein a reflector is provided at the boundary between the first medium layer and the second medium layer.

Claim 30 (new): The boundary acoustic wave device according to Claim 19, wherein an exterior layer material is provided on the surface of the medium layer on which the at least one recess portion is provided.

Claim 31 (new): The boundary acoustic wave device according to Claim 22, wherein an exterior layer material is provided on the surface of the medium layer on which at least one protrusion portion is provided.

Claim 32 (new): The boundary acoustic wave device according to Claim 17, wherein a third medium layer having a sound velocity less than the sound velocity of the first medium layer and the second medium layer is provided between the first medium layer and the second medium layer and defines a boundary layer along which the boundary acoustic wave propagates.